

ELECTRICITY INDUSTRY PARTICIPATION CODE  
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

HAURAKI DISTRICT COUNCIL AND  
MERIDIAN ENERGY

Prepared by: Rebecca Elliot

Date audit commenced: 18 August 2021

Date audit report completed: 15 December 2021

Audit report due date: 01-Oct-21

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## EXECUTIVE SUMMARY

This audit of the **Hauraki District Council Unmetered Streetlights (HDC)** DUML database and processes was conducted at the request of **Meridian Energy Limited (Meridian)**, in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

The audit was conducted in accordance with the audit guidelines for DUML audits version 1.1.

The field work and asset data capture is conducted by McKay Electrical using Pocket RAMM. HDC manage the database and Power Solutions produce the monthly wattage report, on behalf of the HDC, and provide this to Meridian monthly. Overall, the processes are robust, and this is reflected in the field audit findings that confirmed that the database accuracy is within the +/-5% allowable threshold.

The connection of streetlights in new subdivisions was discussed. Powerco have recently changed their process and approval must be given by the retailer and HDC before new streetlights are electrically connected. This poses a challenge as HDC will not add streetlights to RAMM until these have been vested and the 224C has been issued. This is not necessarily the same date as the lights are electrically connected as it appears that Powerco approved contractors will sometimes live for testing and then leave them electrically connected or the developer wants them to be connected prior to vesting. Meridian will liaise with HDC and Powerco to discuss this process to ensure all parties have a clear understanding.

This audit found four non-compliances and no recommendations are made. The future risk rating of six reflects the database accuracy improvement and indicates that the next audit be completed in 18 months. I have considered this in conjunction with Meridian's comments and the minor impact of the non-compliances found and recommend that the next audit be in 24 months.

The matters raised are detailed below:

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Deriving submission information	2.1	11(1) of Schedule 15.3	Seven 20W fluorescent lamps with no ballast recorded resulting in a very minor estimated under submission of 269 kWh per annum.  Submission is based on a snapshot and does not consider historic adjustments.	Moderate	Low	2	Investigating
Description and capacity of load	2.4	11(2)(d) of Schedule 15.3	Seven 20W fluorescent lamps with no ballast recorded resulting in a very minor estimated under submission of 269 kWh per annum.	Strong	Low	1	Cleared
Database accuracy	3.1	15.2 and 15.37B(b)	Seven 20W fluorescent lamps with no ballast recorded resulting in a very minor estimated under submission of 269 kWh per annum.	Strong	Low	1	Cleared
Volume information accuracy	3.2	15.2 and 15.37B(c)	Seven 20W fluorescent lamps with no ballast recorded resulting in a very minor estimated under submission of 269 kWh per annum.  Submission is based on a snapshot and does not consider historic adjustments.	Moderate	Low	2	Investigating
Future Risk Rating						6	

<b>Future risk rating</b>	0	1-4	5-8	9-15	16-18	19+
<b>Indicative audit frequency</b>	36 months	24 months	18 months	12 months	6 months	3 months

## RECOMMENDATIONS

Subject	Section	Clause	Recommendation
			Nil

## ISSUES

Subject	Section	Description	Issue
		Nil	

## 1. ADMINISTRATIVE

### 1.1. Exemptions from Obligations to Comply with Code

#### Code reference

Section 11 of Electricity Industry Act 2010.

#### Code related audit information

Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

#### Audit observation

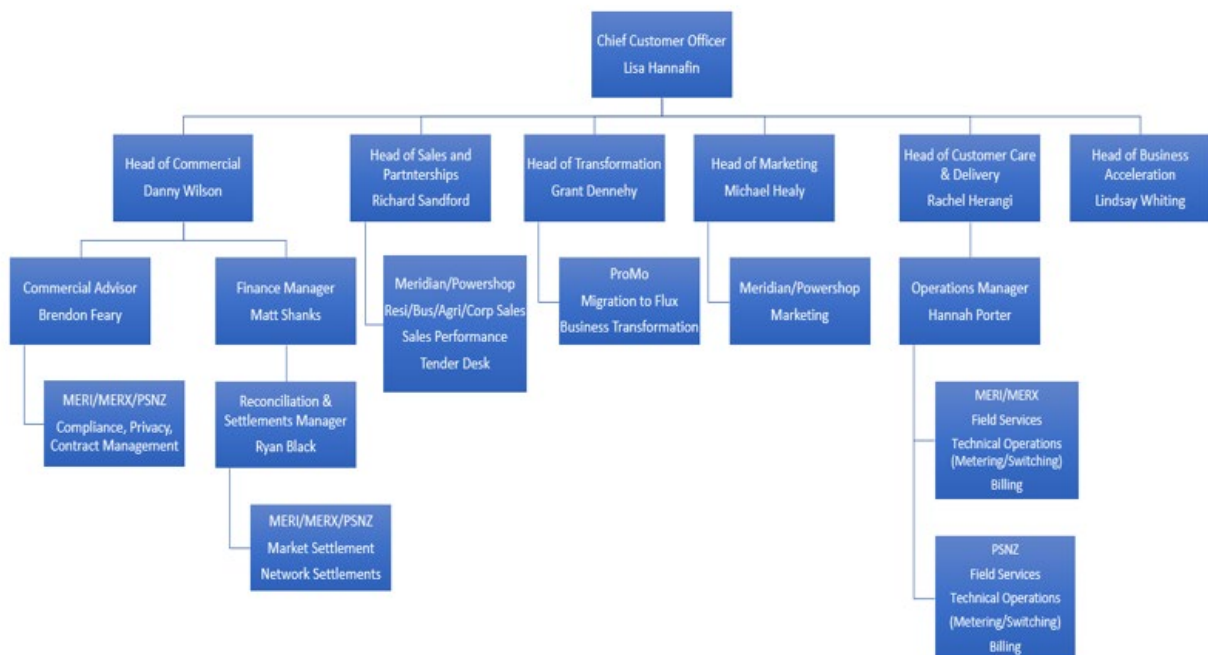
Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

#### Audit commentary

Meridian confirms that there are no exemptions in place relevant to the scope of this audit.

### 1.2. Structure of Organisation

Meridian provided the relevant organisational structure:



### 1.3. Persons involved in this audit

Auditor:

**Rebecca Elliot**

**Veritek Limited**

**Electricity Authority Approved Auditor**

Other personnel assisting in this audit were:

Name	Title	Company
Joel Hogan	Transport Team Leader	Hauraki DC
Jon Stevens	Projects Engineer	Power Solutions Ltd
Melanie Matthews	Quality and Compliance Advisor	Meridian Energy

### 1.4. Hardware and Software

The SQL database used for the management of DUML is remotely hosted by thinkproject New Zealand Limited. The database is commonly known as “RAMM” which stands for “Road Assessment and Maintenance Management”. The specific data used for DUML is held in the Streetlight tables. thinkproject New Zealand Limited backs up the database and assists with disaster recovery as part of their hosting service.

Access to the database is secure by way of password protection.

Systems used by the trader and their agent to calculate submissions are assessed as part of their reconciliation participant audits.

### 1.5. Breaches or Breach Allegations

There are no breach allegations relevant to the scope of this audit.

## 1.6. ICP Data

ICP Number	Description	NSP	Profile	Number of items of load	Database wattage (watts)
1000588656PC0B8	Hauraki District Council Streetlights - Kopu GXP	KPU0661	DST	423	25,130
1000588657PCCFD	Hauraki District Council Streetlights - Waihou GXP	WHU0331	DST	2	99
1000508887PC891	ST_LIGHTS- Powerco	WKO0331	DST	1,486	88,511
1099570384CNB6C	Hauraki Streetlights Counties	BOB0331	DST	34	1,515
TOTAL				1,945	115,255

ICPs 1000588656PC0B8 and 1000588657PCCFD have been created during the audit period as lights so that all lights are mapped to the correct NSP.

## 1.7. Authorisation Received

All information was provided directly by Meridian, HDC and Power Solutions.

## 1.8. Scope of Audit

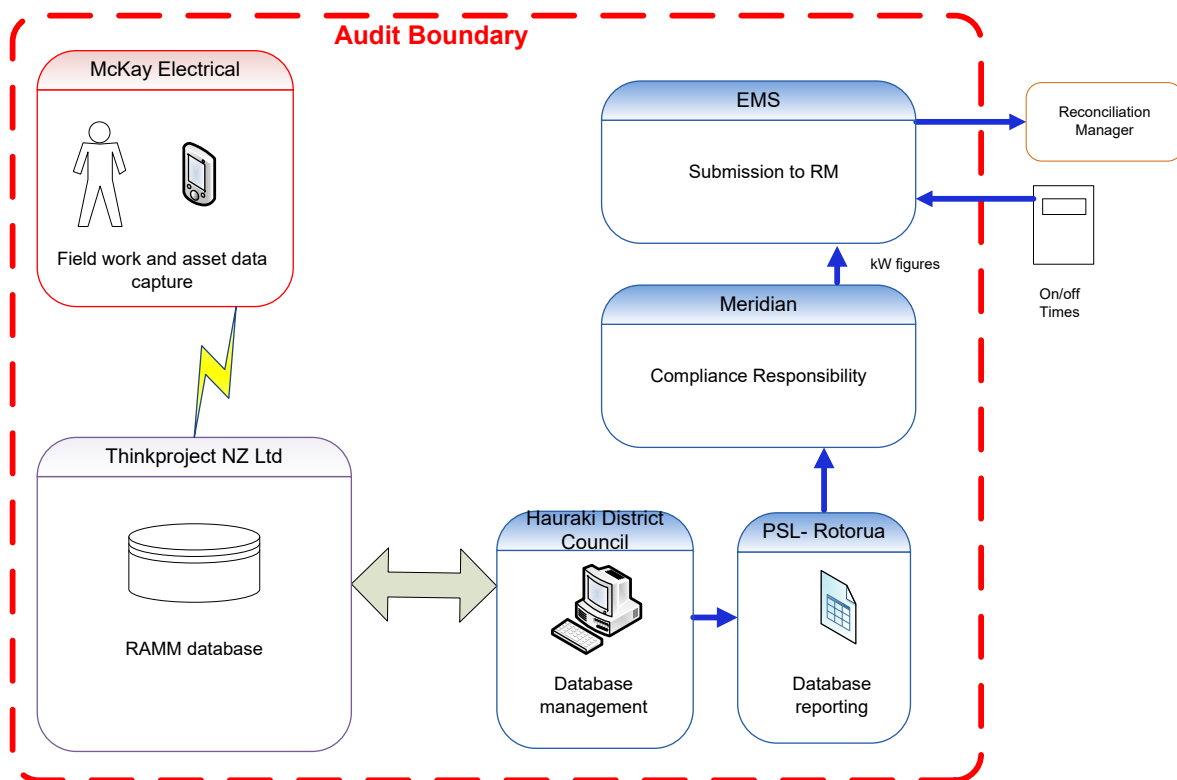
This audit of the **Hauraki District Council Unmetered Streetlights (HDC)** DUML database and processes was conducted at the request of **Meridian Energy Limited (Meridian)**, in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

The audit was conducted in accordance with the audit guidelines for DUML audits version 1.1, which became effective on 1 June 2017.

The database is remotely hosted by thinkproject New Zealand Limited. The field work and asset data capture is conducted by McKay Electrical using Pocket RAMM for maintenance. HDC manage the database and Power Solutions produce the monthly wattage report, on behalf of the HDC, and provide this to Meridian on a monthly basis.

The scope of the audit encompasses the collection, security and accuracy of the data, including the preparation of submission information based on the database reporting. The diagram below shows the audit boundary for clarity at the time of the site audit.





The field audit was undertaken of a statistical sample of 274 items of load on 30<sup>th</sup> November 2021 and the audit meeting was conducted via zoom on December 15<sup>th</sup>, 2021 .

### 1.9. Summary of previous audit

The previous audit was conducted for Meridian in October 2020 by Steve Woods of Veritek Limited. The current status of the non-compliances found in that audit are shown in the table below.

Table of Non-compliances

Subject	Section	Clause	Non-Compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	In absolute terms, total annual consumption is estimated to be 11,200 kWh lower than the DUML database indicates.  Submission is based on a snapshot and does not consider historic adjustments.	Cleared  Still existing
Database accuracy	3.1	11(2)(a) and (aa) of Schedule 15.3	In absolute terms, total annual consumption is estimated to be 11,200 kWh lower than the DUML database indicates.  8 items of load have incorrect ballast wattage recorded	Cleared  Cleared

Subject	Section	Clause	Non-Compliance	Status
Volume information accuracy	3.2	11(2A) of Schedule 15.3	In absolute terms, total annual consumption is estimated to be 11,200 kWh lower than the DUML database indicates.	Cleared
			Submission is based on a snapshot and does not consider historic adjustments.	Cleared

#### 1.10. Distributed unmetered load audits (Clause 16A.26 and 17.295F)

##### Code reference

*Clause 16A.26 and 17.295F*

##### Code related audit information

*Retailers must ensure that DUML database audits are completed:*

- 1. by 1 June 2018 (for DUML that existed prior to 1 June 2017)*
- 2. within three months of submission to the reconciliation manager (for new DUML)*
- 3. within the timeframe specified by the Authority for DUML that has been audited since 1 June 2017.*

##### Audit observation

Meridian have requested Veritek to undertake this streetlight audit.

##### Audit commentary

This audit report was delayed due to the COVID-19 pandemic which prevented the field audit being completed in the required timeframe. This was beyond Meridian's control and therefore I have recorded compliance.

##### Audit outcome

Compliant

## 2. DUML DATABASE REQUIREMENTS

### 2.1. Deriving submission information (Clause 11(1) of Schedule 15.3)

#### Code reference

*Clause 11(1) of Schedule 15.3*

#### Code related audit information

*The retailer must ensure the:*

- *DUML database is up to date*
- *methodology for deriving submission information complies with Schedule 15.5.*

#### Audit observation

The process for calculation of consumption was examined and the application of profiles was checked. The database was checked for accuracy.

#### Audit commentary

Meridian reconciles this DUML load using the DST profile. The total volume submitted to the Reconciliation Manager is based on a monthly database report derived from RAMM and the “burn time” which is sourced from data loggers installed on the Counties and Powerco networks. Meridian supplies EMS with the capacity information and EMS calculates the kWh figure for each ICP and includes this in the relevant AV080 file. This process was audited during Meridian’s reconciliation participant audit and EMS’ agent audit.

The capacities supplied to EMS for September 2021 were checked and confirmed to be the same as the database.

The field audit confirmed that the database accuracy is within +/-5% allowable threshold.

The database was examined and found seven 20W fluorescent lamps with no ballast recorded resulting in a very minor estimated under submission of 269 kWh per annum. This has been corrected by Power Solutions post the data being provided. This is recorded as non-compliance below and in **sections 2.4, 3.1 and 3.2.**

Submission is based on a snapshot of the database at the end of the month and does not consider historic adjustments or the fact that lights can be livened before they are entered into the database.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3  From: 01-Sep-20 To: 30-Sep-21	Seven 20W fluorescent lamps with no ballast recorded resulting in a very minor estimated under submission of 269 kWh per annum. Submission is based on a snapshot and does not consider historic adjustments. Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate because there is room for improvement. The impact is assessed to be low as the database is relatively static so the volume of changes will have a minimal effect on submission.		
Actions taken to resolve the issue		Completion date	Remedial action status
The inaccuracies were advised during a meeting with the council, and they have advised that it has now been corrected. We are considering the impact provision and use of database changes at a daily level will have on our processes and tools.		Completed  June 2022	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
No further comments provided			

## 2.2. ICP identifier and items of load (Clause 11(2)(a) and (aa) of Schedule 15.3)

### Code reference

*Clause 11(2)(a) and (aa) of Schedule 15.3*

### Code related audit information

*The DUMML database must contain:*

- *each ICP identifier for which the retailer is responsible for the DUMML*
- *the items of load associated with the ICP identifier.*

### Audit observation

The database was checked to confirm an ICP was recorded against each item of load.

### Audit commentary

All electrically connected items of load had an ICP recorded in the database.

### Audit outcome

Compliant

### 2.3. Location of each item of load (Clause 11(2)(b) of Schedule 15.3)

#### Code reference

*Clause 11(2)(b) of Schedule 15.3*

#### Code related audit information

*The DUML database must contain the location of each DUML item.*

#### Audit observation

The database was checked to confirm the location is recorded for all items of load.

#### Audit commentary

The database contains the nearest street address, pole numbers and Global Positioning System (GPS) coordinates for each item of load, and users in the office and field can view these locations on a mapping system.

#### Audit outcome

Compliant

### 2.4. Description and capacity of load (Clause 11(2)(c) and (d) of Schedule 15.3)

#### Code reference

*Clause 11(2)(c) and (d) of Schedule 15.3*

#### Code related audit information

*The DUML database must contain:*

- *a description of load type for each item of load and any assumptions regarding the capacity*
- *the capacity of each item in watts.*

#### Audit observation

The database was checked to confirm that it contained a field for lamp type and wattage capacity and included any ballast or gear wattage and that each item of load had a value recorded in these fields.

#### Audit commentary

The database contains two records for wattage, firstly the lamp wattage and secondly the gear wattage, which represents ballast losses.

A check of the database found seven 20W fluorescent lights with no ballast. The Electricity Authority standardised wattage table indicates these should have a ballast wattage of 9W. This will be resulting in a very minor estimated under submission of 269 kWh per annum. This has been corrected by Power Solutions post the data being provided. This is recorded as non-compliance below and in **sections 2.1, 3.1 and 3.2.**

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.4 With: Clause 11(2)(d) of Schedule 15.3  From: 01-Sep-20 To: 30-Sep-21	Seven 20W fluorescent lamps with no ballast recorded resulting in a very minor estimated under submission of 269 kWh per annum.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as strong as the processes in place mitigate risk to an acceptable level.  The impact is assessed to be low, based on the kWh differences described above.		
Actions taken to resolve the issue		Completion date	Remedial action status
The inaccuracies were advised during a meeting with the council, and they have advised that it has now been corrected		Completed	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
No further comments provided			

## 2.5. All load recorded in database (Clause 11(2A) of Schedule 15.3)

### Code reference

*Clause 11(2A) of Schedule 15.3*

### Code related audit information

*The retailer must ensure that each item of DUML for which it is responsible is recorded in this database.*

### Audit observation

The field audit was undertaken of a statistical sample of 274 items of load.

### Audit commentary

The field audit discrepancies are detailed in the table below:

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
DARLINGTON ST/HARRIS PL RAB	1	1	-	1	1 x 20W LED recorded as 19W LED
FACTORY LANE	2	2	-	1	1 x 26W LED recorded as 20W LED
NORMANBY RD (SH 2)	40	40	-	1	1 x 60.5W LED recorded as 19.5W LED
PARRY PALM AVE SLIP (KENSINGTON - END)	7	7	-	3	2 x 20W LED recorded as 26W LED 1 x 20W LED recorded as 150W HPS
SEDDON ST (SH 2)	11	11	-	1	1 x 73W LED recorded as 250W HPS
TAURANGA RD (SH 2)	32	32	-	1	1 x 26W LED recorded as 150W HPS
<b>Grand Total</b>	<b>274</b>	<b>274</b>	-	<b>8</b>	

There were no additional items of load found in the field. The database accuracy is discussed in **section 3.1**.

### Audit outcome

Compliant

## 2.6. Tracking of load changes (Clause 11(3) of Schedule 15.3)

### Code reference

*Clause 11(3) of Schedule 15.3*

### Code related audit information

*The DUMML database must track additions and removals in a manner that allows the total load (in kW) to be retrospectively derived for any given day.*

### Audit observation

The process for tracking of changes in the database was examined.

### Audit commentary

The RAMM database functionality achieves compliance with the code.

The change management process and the compliance of the database reporting provided to Meridian is detailed in **sections 3.1** and **3.2**.

### Audit outcome

Compliant

## 2.7. Audit trail (Clause 11(4) of Schedule 15.3)

### **Code reference**

*Clause 11(4) of Schedule 15.3*

### **Code related audit information**

*The DUMML database must incorporate an audit trail of all additions and changes that identify:*

- *the before and after values for changes*
- *the date and time of the change or addition*
- *the person who made the addition or change to the database.*

### **Audit observation**

The database was checked for audit trails.

### **Audit commentary**

The RAMM database has a complete audit trail of all additions and changes to the database information.

### **Audit outcome**

Compliant



### 3. ACCURACY OF DUML DATABASE

#### 3.1. Database accuracy (Clause 15.2 and 15.37B(b))

##### Code reference

Clause 15.2 and 15.37B(b)

##### Code related audit information

*Audit must verify that the information recorded in the retailer's DUML database is complete and accurate.*

##### Audit observation

The DUML Statistical Sampling Guideline was used to determine the database accuracy. The table below shows the survey plan.

Plan Item	Comments
Area of interest	Hauraki plains area
Strata	<p>The database contains items of load in Hauraki District Council area.</p> <p>The area is across two networks. There were no new developments identified.</p> <p>The processes for the management of HDC items of load are the same, but I decided to place the items of load into four strata, as follows:</p> <ol style="list-style-type: none"><li>1. Rural</li><li>2. Paeroa</li><li>3. Waihi A-O</li><li>4. Waihi P-Z</li></ol>
Area units	I created a pivot table of the roads in each area, and I used a random number generator in a spreadsheet to select a total of 48 sub-units.
Total items of load	274 items of load were checked.

Wattages were checked for alignment with the published standardised wattage table produced by the Electricity Authority.

The change management process and timeliness of database updates was evaluated.

##### Audit commentary

##### Database accuracy based on the field audit

A field audit was conducted of a statistical sample of 274 items of load. The “database auditing tool” was used to analyse the results, which are shown in the table below.

Result	Percentage	Comments
The point estimate of R	99.0	Wattage from survey is lower than the database wattage by 1%
R <sub>L</sub>	97.1	With a 95% level of confidence, it can be concluded that the error could be between -2.9% and +0.3%
R <sub>H</sub>	100.3	

These results were categorised in accordance with the “Distributed Unmetered Load Statistical Sampling Audit Guideline”, effective from 1 February 2019. The table below shows that Scenario A (detailed below) applies, and the database is confirmed to be accurate to within the +/-5% threshold.

In absolute terms the installed capacity is estimated to be 1 kW lower than the database indicates.

There is a 95% level of confidence that the installed capacity is between 3 kW lower to the same as the database.

In absolute terms, total annual consumption is estimated to be 5,000 kWh lower than the DUML database indicates.

There is a 95% level of confidence that the annual consumption is between 14,400 kWh p.a. lower to 1,600 kWh p.a. higher than the database indicates.

Scenario	Description
<b>A - Good accuracy, good precision</b>	<p>This scenario applies if:</p> <ul style="list-style-type: none"> <li>(a) R<sub>H</sub> is less than 1.05; and</li> <li>(b) R<sub>L</sub> is greater than 0.95</li> </ul> <p>The conclusion from this scenario is that:</p> <ul style="list-style-type: none"> <li>(a) the best available estimate indicates that the database is accurate within +/- 5 %; and</li> <li>(b) this is the best outcome.</li> </ul>
<b>B - Poor accuracy, demonstrated with statistical significance</b>	<p>This scenario applies if:</p> <ul style="list-style-type: none"> <li>(a) the point estimate of R is less than 0.95 or greater than 1.05</li> <li>(b) as a result, either R<sub>L</sub> is less than 0.95 or R<sub>H</sub> is greater than 1.05.</li> </ul> <p>There is evidence to support this finding. In statistical terms, the inaccuracy is statistically significant at the 95% level</p>
<b>C - Poor precision</b>	<p>This scenario applies if:</p> <ul style="list-style-type: none"> <li>(a) the point estimate of R is between 0.95 and 1.05</li> <li>(b) R<sub>L</sub> is less than 0.95 and/or R<sub>H</sub> is greater than 1.05</li> </ul> <p>The conclusion from this scenario is that the best available estimate is not precise enough to conclude that the database is accurate within +/- 5 %</p>

### **Lamp description and capacity accuracy**

The database contains two records for wattage, firstly the lamp wattage and secondly the gear wattage, which represents ballast losses. A check of the database found seven 20W fluorescent lights with no ballast. The Electricity Authority standardised wattage table indicates these should have a ballast wattage of 9W. This will be resulting in a very minor estimated under submission of 269 kWh per annum. This has been corrected by Power Solutions post the data being provided. This is recorded as non-compliance below and in **sections 2.1, 2.4. and 3.2.**

### **NZTA lighting**

NZTA lighting is included in the database and was checked as part of the field audit.

### **ICP accuracy**

Powerco advised HDC during the audit period that new ICPs needed to be created to ensure that all load was recorded against the correct NSP. Two additional ICPs have been created and all electrically connected items of load have the correct ICP recorded.

### **Location accuracy**

The location details were found to be accurate.

### **Change management process findings**

Processes to track changes to the database were reviewed.

The process for new connections in new developments was discussed. Powerco have recently changed their process and approval must be given by the retailer and HDC before new streetlights are electrically connected. This poses a challenge as HDC will not add streetlights to RAMM until these have been vested and the 224C has been issued. This is not necessarily the same date as the lights are electrically connected as it appears that Powerco approved contractors will sometimes live for testing and then leave them electrically connected or the developer wants them to be connected prior to vesting. Meridian will liaise with HDC and Powerco to discuss this process to ensure all parties have a clear understanding.

For new streetlights such as infill lighting, HDC manage the end-to-end process. The date of electrical connection is recorded as the date of install in RAMM. The monthly report is provided as a snapshot and does not track load changes at a daily level. This is recorded as non-compliance in **sections 2.1 and 3.2.**

All fault and maintenance work is controlled by HDC and conducted by McKay Electrical through "RAMM Contractor" and once each job is completed the database is updated via field PDA's.

HDC has completed the main LED rollout and only the decorative lighting remains to be changed. HDC are investigating options to upgrade these to LED in the future.

There are no festive lights connected to the streetlight circuits.

### **Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 01-Sep-20 To: 30-Sep-21	Seven 20W fluorescent lamps with no ballast recorded resulting in a very minor estimated under submission of 269 kWh per annum. Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as strong as they will mitigate risk to an acceptable level. The impact is assessed to be low, based on the kWh differences described above.		
Actions taken to resolve the issue		Completion date	Remedial action status
The inaccuracies were advised during a meeting with the council, and they have advised that it has now been corrected		Completed	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
No further comments provided			

### 3.2. Volume information accuracy (Clause 15.2 and 15.37B(c))

#### Code reference

Clause 15.2 and 15.37B(c)

#### Code related audit information

The audit must verify that:

- volume information for the DUML is being calculated accurately
- profiles for DUML have been correctly applied.

#### Audit observation

The submission was checked for accuracy for the month the database extract was supplied. This included:

- checking the registry to confirm that the ICP has the correct profile and submission flag, and
- checking the database extract combined with the burn hours against the submitted figure to confirm accuracy.

#### Audit commentary

Meridian reconciles this DUML load using the DST profile. The total volume submitted to the Reconciliation Manager is based on a monthly database report derived from RAMM and the "burn time" which is sourced from data loggers installed on the Counties and Powerco networks. Meridian supplies EMS with the capacity information and EMS calculates the kWh figure for each ICP and includes this in the relevant AV080 file. This process was audited during Meridian's reconciliation participant audit and EMS' agent audit.

The capacities supplied to EMS for September 2021 were checked and confirmed to be the same as the database.

The field audit confirmed that the database accuracy is within +/-5% allowable threshold.

Submission is based on a snapshot of the database at the end of the month and does not consider historic adjustments or the fact that lights can be lived before they are entered into the database.

The database was examined and found seven 20W fluorescent lamps with no ballast recorded resulting in a very minor estimated under submission of 269 kWh per annum. This has been corrected by Power Solutions post the data being provided. This is recorded as non-compliance below and in **sections 2.1, 2.4 and 3.1**.

**Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c)  From: 01-Sep-20 To: 30-Sep-21	Seven 20W fluorescent lamps with no ballast recorded resulting in a very minor estimated under submission of 269 kWh per annum.  Submission is based on a snapshot and does not consider historic adjustments.  Potential impact: Low Actual impact: Low Audit history: Twice previously  Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as moderate because there is room for improvement.  The impact is assessed to be low as the database is relatively static so the volume of changes will have a minimal effect on submission.		
Actions taken to resolve the issue		Completion date	Remedial action status
The inaccuracies were advised during a meeting with the council, and they have advised that it has now been corrected  We are considering the impact provision and use of database changes at a daily level will have on our processes and tools.		Completed  June 2022	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
No further comments provided			

## CONCLUSION

The field work and asset data capture is conducted by McKay Electrical using Pocket RAMM. HDC manage the database and Power Solutions produce the monthly wattage report, on behalf of the HDC, and provide this to Meridian monthly. Overall, the processes are robust, and this is reflected in the field audit findings that confirmed that the database accuracy is within the +/-5% allowable threshold.

The connection of streetlights in new subdivisions was discussed. Powerco have recently changed their process and approval must be given by the Retailer and HDC before new streetlights are electrically connected. This poses a challenge as HDC will not add streetlights to RAMM until these have been vested and the 224C has been issued. This is not necessarily the same date as the lights are electrically connected as it appears that Powerco approved contractors will sometimes live for testing and then leave them electrically connected or the developer wants them to be connected prior to vesting. Meridian will liaise with HDC and Powerco to discuss this process to ensure all parties have a clear understanding.

This audit found four non-compliances and no recommendations are made. The future risk rating of six reflects the database accuracy improvement and indicates that the next audit be completed in 18 months. I have considered this in conjunction with Meridian's comments and the minor impact of the non-compliances found and recommend that the next audit be in 24 months.

## PARTICIPANT RESPONSE

Meridian have reviewed this report and their comments are recorded in the body of the report. No further comments have been provided.